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ABSTRACT

The purpose of these units are: 1) to teach social science concepts using aviation as a vehicle to create interest and provide a meaningful context; 2) to facilitate skilled development through varied learning experiences which meet the individual needs of the students; 3) to provide learning experiences which build upon previous knowledge; 4) to develop the ability to apply knowledge to real life situations; 5) to develop the student's ability to think critically and logically; and, 6) to develop wholesome attitudes, values, and sensitivities through group interaction. Three major observations are woven through the content and activities: 1) aviation affects man's cultural patterns; 2) it is vital to modern man's communication and interaction in society; and, 3) modern man is dependent upon an economic system which is influenced by the use of aviation resources. The units are designed for kindergarten through eighth grade, and can also be utilized in language arts, science, and arithmetic. Many resources are appended: biographies on aviation pioneers, synopsis of aviation rules and regulations, a bibliography of books, booklets, periodicals, articles, and audiovisual materials. (Author/SBE)

AVIATION EQUALS ACTION

IN SOCIAL STUDIES

ED049140

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AIR AGE EDUCATION

SP 000 964

ELEMENTARY UNITS

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Air Age Education Division
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American Airlines
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New York, New York 10017

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No. 1 Lighthouse Lane
Fountain Valley, California 92708

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INTRODUCTION

In a search for learning materials that would better convey social science concepts and generalizations to students, Air Age Education has been found to be a natural vehicle with a high degree of motivation.

A team of Fountain Valley Teachers, sponsored and initiated by Cessna Aircraft Company and American Airlines, were given planning time and extra resources to design an elementary unit which will be as functional as possible in serving teachers. The unit recognizes recent developments in social studies education which includes the use of key ideas from history and the social sciences woven into a K-8 program. It also recognizes that there are understandings, skills, attitudes, and values which can be developed with this unit as a vehicle to serve the continuing social studies programming of schools. The unit also makes it possible for teachers to utilize this material in language arts, science and arithmetic and it can be included for use in core programs as well as self-contained classrooms.

The format of this unit is developmental and the learnings and activities have been designed from simple to complex, concrete to abstract. Suggestions have been made as to appropriate grade levels for these activities, but they could be used with very little alteration at different grade levels and it is up to the teacher to make the selection. The teacher could take any one activity and go into as much detail as needed. Some teachers may dismiss certain activities while others may take a given activity and work with it for several days. Part of this depends on the response of the class, and where there is interest and involvement the teacher should let it develop naturally as long as it is fruitful.

There are probably more suggestions offered in the unit than any one teacher would use but the material is designed for use as a resource from which to draw a variety of ideas. These can be combined with the teachers own ideas and suggestions.

In addition, the publishers have especially identified applicable materials from the Cessna/American Airlines Teacher Kit which is described on page 15. This kit provides an immediate access to materials for the unit in case other resources are difficult to obtain.

Teachers are invited to send in suggestions for improving and amplifying this unit which would be shared with others in a future edition or in our special teacher newsletter Cross Currents. We would also be pleased to have teachers copy or reproduce any portion of this unit for classroom use or distribution to other teachers.

Finally, we wish to express our gratitude to the dedicated teachers of the Fountain Valley School District for their many hours of work and for their classroom testing of the ideas contained in this unit.

Frank G. Mitchell
Manager, Air Age Education
Cessna Aircraft Company
1970

PURPOSE

THE PURPOSE OF THIS UNIT IS TO:

- Teach social science concepts using aviation as a vehicle to create interest and provide a meaningful context.
- Facilitate skilled development through varied learning experiences which meet the individual needs of students.
- Provide learning experiences which build upon previous knowledge.
- Develop the ability to apply knowledge to real life situations.
- Develop the student's ability to think critically and logically.
- Develop wholesome attitudes, feelings and sensitivities through group interaction.

IN PURSUIT OF THESE GOALS, THREE MAJOR OBSERVATIONS ARE WOVEN THROUGH THE UNIT'S CONTENT AND ACTIVITIES:

- Aviation has affected, is affecting and will affect man's cultural patterns.
- Aviation is vital to modern man's communication and interaction in society.
- Modern man is dependent upon an economic system which is influenced by intelligent use of aviation resources.

ANTHROPOLOGY

Understandings:

Man's progress is based upon his use of past experiences.

People rely on the ideas and accomplishments of others in order to progress.

Aviation has helped our country grow and progress.

General Objectives:

As a result of participating in this unit, the student will:

K-2
- List ways that aviation affects his daily life.
- Describe how aviation affects his immediate environment.
- Describe the importance aviation has for the community.

2-4
- Compare how the historical sequence of the development of aviation has affected man's use of transportation and communication.
- Compare how man's use of aviation in the past and in the present has affected the shaping of society's cultural patterns.

4-6
- Compare the relationship between the development of aviation and the technological advancement of man.
- Describe the effect of aviation on American culture as compared to the effect of aviation on one other culture in the American hemisphere.

6-8
- Use man's knowledge of aviation to predict advancements in aviation as a means of coping with future cultural needs.
- Create a plan to show how man would use aviation as a means to communicate and transport in an advanced technological society.

ECONOMICS

Understandings:

People work to satisfy some of their needs and wants.

Modern man attempts to satisfy his needs and wants by using income to purchase goods and services.

Aviation has helped man to satisfy many of his needs and wants as a producer and as a consumer.

General Objectives:

As a result of participating in this unit, the student will:

K-2
- Identify and list the effects modern aviation has upon the home and family.
- Identify the occupations and services necessary to operate a local airport.
- Compare the relationship between the airport and the economy of the community.

2-4
- Identify the function of modern aviation as it relates to the economic needs and services provided by modern aviation.
- Identify the interdependency between the industries of the state and the services provided by modern aviation.

4-6
- Identify the physical and human resources necessary for the expansion of the aviation industry.
- Identify aviation's contribution to the law of supply and demand.

6-8
- Describe ways in which modern civilization has affected international trade.
- Compare the relationship that has taken place between the growth of modern aviation and the development of the modern American national economy.

SOCIOLOGY

Understandings:

Man, being a social creature, must have guidelines in order to function within a society.

Rules and regulations are needed to develop useful citizens.

Aviation has developed rules and regulations for safety, convenience and effective organization.

General Objectives:

As a result of participating in this unit, the student will:

K-2
- List the ways that the use of aviation has affected people in his immediate environment.
- List and describe the organizations and agencies within the community that use aviation in their operation.
- Describe the relationship of aviation and the expansion of community services.

2-4
- Compare the function of the local airport with a nearby large metropolitan facility and examine the need for more general aviation facilities.
- Identify and discuss the need for expanded and more sophisticated types of communication and transportation facilities at a large metropolitan airport.

4-6
- Discuss the need for surrounding states to establish guidelines in order to have a functional interstate communication system for all aspects of air travel.
- Compare how cultural needs of different nations determine the operation of that nation's system for transportation and communication.

6-8
- Identify ways by which modern aviation can help to solve the communication and transportation problems of a modern technological society.
- Identify, using aviation as a vehicle, the implications for establishing an international system for communication and transportation.

ACTIVITIES FOR IMPLEMENTING OBJECTIVES

ANTHROPOLOGY

* – *Appendix resources*
** – *Cessna/American Airlines Teacher Kit*

Suggested Grade Levels

K-2 Bring an advertisement or letter received through the mail

Identify those delivered by air and list reasons for using air mail delivery.

K-2 Bring a picture of an airplane from a newspaper or magazine and tell about how it is being used.

K-2 Show pictures of past and present airplanes and discuss changes: i.e., size, speed, range.

** Display pictures: Cessna and American Airlines

K-2 Bring a list of foods chosen from mother's shopping list. Categorize those foods which have been transported by air.

Why were they brought by air?

How long did it take?

What kind of airplanes are used?

** Film: "Airplanes Work for Us"

K-2 Take a trip to the grocery store to view and discuss how many foods have been transported at some time by air. (Example: Discuss why fresh pineapple is flown in, but canned pineapple is not.)

* Film: "Where Does Our Food Come From?"

K-2 On a large map, identify the location of student's relatives. Show how air travel can facilitate family relationships.

* Film: "Airplane Changes Our World Map"

* Filmstrips: "Families Around the World"; "Jet Age Geography in the U.S.A."; "A Flight to Grandmothers"

2-4 Plan a study trip to the airport to find the answers to student questions, including:

How do people of the community use the airport?

What accommodations must

ECONOMICS

**Appendix resources*
***Cessna/American Airlines Teacher Kit*

Suggested Grade Levels

K-2 Take a trip to an airport to identify jobs that fathers and mothers might hold in the aviation industry.

List jobs and duties on chart as seen and described by students following trip.

* Book: "Come to Work With Us in an Airport."

K-2 Display objects or materials that might be transported by an airplane. If real articles are not available, a picture chart or scrapbook could be substituted.

* Film: "Behind the Scenes at the Airport"; "Where Does Our Food Come From?"

* Filmstrip: "Families Around the World"

K-2 Build a model of the airport through block play or paper construction (e.g., paper mache or paper sculpture). Use the model to illustrate occupations and services.

** Film: "The Busy Airport"

* Film: 'Behind the Scenes at the Airport"

* Filmstrips: "Airplanes at Work – Set I"; "Seeing the Airport"

2-4 Poll the neighborhood to determine if there are people within the community employed by the aviation industry or whose jobs depend on aviation in some way.

** Films: "Airplanes Work For Us"; "How Air Helps Us"

* Filmstrip: "Airport and Your Community"

2-4 List needs and wants satisfied through aviation and collect pictures of goods and services made possible through aviation (e.g., Doctor flown in for special operation; salesman going to different cities; engineer flying to different plants to plan, install and maintain equipment; crop dusting; fighting forest fires; feeding isolated cattle; etc.)

** Film: "Come On Up"

* Film: "Eye in the Sky"

SOCIOLOGY

* – *Appendix resources*
** – *Cessna/American Airlines Teacher Kit*

Suggested Grade Levels

K-2 Discuss and compile the ways in which aviation affects our family in regard to:

Sound level

Height of airplanes over homes

Travel for business, pleasure, vacations

Traffic to and from airport

* Book: "At the Airport"

* Film: "Air Age All Around Us"

** Films: "If I Had Wings"; "Transportation in the Modern World"

* Filmstrips: "Airport and Your Community"; "People at Work"

* Study Prints: "How People Travel"

* Aviation Rules and Regulations

** Aviation Glossary

1-2 Discuss which commercial enterprises use airplanes and how air transportation affects their operation.

Grocery store, drug store, newspapers, farms and ranches, pipeline companies, construction companies, flight schools.

* Book: "The Airplane at the Airport"

* Films: "Air Force Cameras in Action"; "Airplane Changes Our World Map"; "Smoke Jumpers"

* Study Print: "Community Helpers, Set I, Group II"

Also use resource people in the community.

2-4 Locate, plan, design and construct a model airport with a single 4,000' runway taking into account:

Community needs

Consequence of site location

Equipment and personnel necessary for operation

ANTHROPOLOGY

the people of the community provide for successful operation of the airport?

** Films: "Airplanes Work For Us"; "The Busy Airport"

* Films: "Airport Activities"; "Air Passenger"; "The Airport"; "Behind the Scenes at the Airport"; "Air Transportation"; "Air Transportation – Flight"; "Air Transportation – Passenger"

* Books: "The Airplane at the Airport"; "The Airport – Our Link to the Sky"; "At the Airport"; "Let's Go to the Airport"

** Booklet: "Come Fly With Us"

* Filmstrips: "The Airport and You"; "The Airport and Your Community"; "Let's Fly"

3-4 Display study prints or have students draw pictures illustrating the sequential development of aviation. Create a title for each picture to "tell the story." e.g., "First Cessna to Fly," "747 Carries Most Passengers."

* Study Prints: "History of Aviation"; "History of Mail"; "Historic Planes"; "Traces History of Aviation"

** Study Prints: "Historical Picture Series"

* Book: "Planes and How to Draw Them"

4-6 Research and report on selected persons, places and events significant in the history and development of aviation. A list of some aviation pioneers is given in the Appendix.

* Books: "Balloons – From Paperbags to Sky Flights"; "History of Flight"; "Historic Models of Early America and How to Make Them"; "Pioneers of Flight"; "Aircraft Aircraft"

** Booklet: "Flying Machine: First Cousin to the Bird"

* Films: "Father of the Space Age"; "Wings of Yesterday"; "Five Steps to Jet

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** Filmstrip: "New Bridges"

** Booklet: "Come Fly With Us"

2-4 List ways in which a father employed in the aviation industry spends his wages. Discuss the effect his spending has on other commerical and service enterprises in the community.

Interview parents.

Interview or write employee of aviation industry.

* Film: "What Fathers Do"

4-6 Collect newspaper articles which show how aviation specifically affects the economy of the community (e.g., salary, parking, fees, air fare, cargo rates.)

* Films: "Behind the Scenes at the Airport"; "Where Does Our Food Come From?"

* Filmstrips: "Airplanes at Work"; "Airport and Your Community"

* Study Print: "Community Helpers – Set I and II"

4-6 Experiment with perishables (flowers, seafood, fresh fruits and vegetables) to show a need for fast and inexpensive air transportation.

Where do they come from? Why?

What places do they go to? Why?

* Film: "Where Does Our Food Come From?"

Interview or write purchasing department in local market.

Write to Dole Pineapple Co. in Hawaii.

Interview or write Information Officer of the nearest military base to inquire how food is supplied.

4-8 Write letters to state capitol requesting information concerning:

The growth of the aviation industry within the state.

State taxes or tariffs levied on fares or freight.

* Write N.A.S.A.O. for addresses of State Departments of Aviation.

4-6 List enterprises in the state which rely heavily upon aviation. Identify specific reasons

SOCIOLOGY

Give students map of a town with location of business, industry, homes, airport. Ask them to locate a new municipal airport or enlarge existing one and add a general aviation airport.

* Books: "The Airport – Our Link to the Sky"; "How a Jet Flies"; "Planes and How to Draw Them"

* Films: "Aircraft"; "The Airport"; "The Best Investment We Ever Made"; "Cross Country Flight"

* Filmstrips: "How Is An Airplane Controlled?"; "How We Fly"

* Aviation Rules and Regulations

** Aviation Glossary

** Parts of an Airplane Charts

** Instrument Panel Charts

** Instrument Landing System Chart

* Also, write to General Aviation Manufacturers Association for airport information.

4-6 Locate, design and construct a model metropolitan airport with two main runways, at least 8,000 feet in length, auxiliary runways and taxi strips. Contrast and compare the metropolitan airport with its smaller counterpart in such areas as:

Size of grounds and facilities

Number and types of personnel

Operational costs

Advantages and problems

* Films: "Air Control"; "Airport Activities"; "Airport and the Jet Age"

* Filmstrip: "Getting There by Air"

* International Phonetic Alphabet

** Flight Deck Chart

** Aviation Glossary

Use resource person: airport manager or member of the local airport board.

Contact State Department of Aviation for descriptive data on airports.

4-6 Write letter to a local and a

ANTHROPOLOGY

Flight"; "The John Glenn Story"; "History of Aviation"; "Of Men and Wings"; "Man in Flight"; "Pioneers of Space"; "History of Flight Series"

* Filmstrips: "Airplanes – Set I"; "How Do Helicopters Fly"; "Man in Flight"; "Transportation by Air"; "Jet Age Flight"; "Modern Flight"

** Filmstrips: "History of Cessna"

* Study Prints: "Airplanes in Flight"; "Famous Douglas Airplanes"; "History of Aviation"; "Historic Planes"; "Traces History of Aviation"

** Study Prints: "Historical Picture Series"

4-6 Develop a timeline illustrating the chronology of history-making events in aviation.

* Reference: "Volumes 6 and 15, Above and Beyond, the Encyclopedia of Aviation and Space Sciences"

4-5 In committees, study and determine the various forms of transportation used by different cultures. The committee can:

Compare the length of time it takes to travel a given distance by the various forms of transportation (foot, car, boat, horseback, train, airplane).

List the most popular modes of transportation in each culture in the 19th century. Identify the reasons for the popularity of the particular modes listed.

For comparison repeat process for same cultures in the mid-20th century.

* Books: "Our Big World"; "New York to Rome"; "The Big Bird Flight Story"

* Films: "Air Age All Around Us"; "Airplane Changes Our World Map"; "Airplane Trip to Mexico"; "The Other Passenger"; "747 Story"; "Our Shrinking World"; "The Vital Link"

ECONOMICS

for this dependence in each case.

* Film: "Behind the Scenes at the Airport"

* Filmstrips: "Jet Age Flight"; "Aviation as a Career – Manufacturing"

* Study Print: "History of Mail"

** Booklets: "Magic of Making Airplanes"; "What Are You Going To Do With the Next Half Century?"

5-8 Design a questionnaire to determine whether a need exists in the community for an expansion of aviation services. Sample questions:

How often do you fly?

Did you get the flight you wanted?

Do most out-of-town people who call on your business fly or use other transportation? Explain.

Do you use air transportation in your purchasing and distributing?

Distribute the questionnaire to a random sampling of the community.

* Film: "The Shape of Things to Come"

** Film: "Airplanes Work for Us"

** Filmstrip: "New Bridges"

5-7 Have students chart state products (crops, manufactured goods) which will be exchanged on the basis of supply and demand through interstate aviation.

Write State Department of Industry and Trade.

Contact local airlines and fixed base operators for information.

6-8 Interview persons concerned with community growth and aviation expansion (e.g., Chamber of Commerce, Aviation Representative, Homeowner Association Representative). Sample questions:

What is the rate of population growth in the community (current and projected)?

What are the aviation problems that currently exist in

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metropolitan airport requesting answers to specific questions such as:

What length are the runways?

What is the airport traffic pattern?

How does weather affect air traffic?

What types of aircraft use the airport?

What public facilities are available (parking, restaurants)?

What is the capacity to handle traffic at peak times?

** Films: "Airplanes and How They Fly"; "The Busy Airport"

* Film: "Clouds and Weather"

* Filmstrip: "Seeing the Airport"

* Aviation Rules and Regulations

** ILS Landing System Chart

** Compass Rose Game

4-6 Write a class letter to the Federal Aviation Administration to determine:

Who controls aviation rules and why they are necessary. How these rules are policed. How consistent they are from state to state and country to country.

Assign students to roll play a broadcast between a plane and control tower during landing maneuvers. Have a local pilot or FAA employee demonstrate proper communications to the class.

Develop individual or class picture books or a bulletin board illustrating the use of aviation rules. Write captions for each of the pictures.

* Film: "Private Pilot"

* Write to Sanderson-Times Mirror for available radio communications records.

5-6 Take a field trip to the local airport and interview resource people in the diversified jobs related to airport communication and transportation.

Ask about problems related to the specific job.

Analyze the interrelatedness

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** Films: "World on Wings"; "Aerial Bridges of Warm Friendship"

* Filmstrips: "People of Other Neighborhoods"; "Families Around the World"

* Study Prints: "How People Travel"; "Early American Transportation"; "ICAO Exhibition Picture Set"

** Chart: "Map Comparison Chart"

6-8 Compare the uses of aviation in the United States to those in a South American country. (e.g., mail delivery, agricultural, conservation, commuter service, recreation, military service, import-export, business, tourist trade, and food shipments)

* Contact embassies, International Airlines, I.A.T.A., and I.C.A.O. for information.

6-8 Arrange a display of model airplanes. Identify the technological advancements represented by each model. Explore other advances in retractable landing gear, closed cockpit, pressurized cabins, electronic equipment, bi-wing to mono-wing.

* Books: "Flight"; "Complete Book of Jets and Rockets"; "Great Flights and Air Adventures From Balloons to Spacecraft"; "Next Fifty Years of Flight"

* Films: "Challenge of Outer Space"; "Path to Safety"; "Saturn Propulsion Systems"; "Safe Aircraft"; "Man in Space"; "Five Steps to Jet"; "Aerodynamics – Problems of Flight"; "We Saw It Happen"

** Films: "Transportation in the Modern World"; Airplanes and How They Fly"

* Filmstrips: "What Makes an Airplane Fly"; "Airplanes and How They Fly"

** Filmstrips: "Your Flying Partner"

* Study Prints: "Showing Parts of an Airplane"

** Chart: "Parts of an Airplane"

7-8 Discuss problems related to aviation in the community?

Is there a new airport planned or an increase in facilities needed?

How will improvements be financed?

Talk to older businessmen:

Are there goods and services now available to you through aviation which you could not get in the past? How old were you when you took your first flight? Where did you go? Why did you fly?

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7-8 Have students interview pilots with commercial and instrument licenses. Ask pilots where they fly, under what conditions, what opportunities exist?

Interview people who fly commercially a great deal. Ask why they fly and what things are accomplished more easily by flying.

Interview people who rent planes, fly planes they own, or fly in company aircraft. Ask what advantages they have in using air transportation as they do.

Contact local airline offices and aircraft dealers for names of persons to interview.

* Periodical: "Invitation to Flying (Annual)"

* Book: "Who, Me Fly?"

* Booklets: "Facts About Learning to Fly"; "Fly-It-Yourself is a Family Affair"; "The Challenge: Learning to Fly"; "Why Did Doc Sell Dobbin?"

** Filmstrip: "Path of Least Resistance"

6-8 Compare retail price list of commercial airliners (prop and jet) and general aviation aircraft (single engine and twin engine) over the years. Show increased cost of living, materials, labor, etc., on chart or graph. Ask why do airplanes cost more? (Improvements, bigger engines, more space, speed, safety features, electronics, better materials.)

Write manufacturers for price comparisons.

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of personnel involved in a take-off or landing.

Investigate the rules under which they operate.

Utilize aviation rules and regulations to give students a series of traffic and safety problems. Ask them to think of solutions and then tell rules that now exist (e.g., airplanes flying every direction at different altitudes or one airplane overtaking another).

6-8 Discuss the design and use of flight plans in air transportation. Have each student plan a flight for a different destination. Use airplane flight schedules or FAA flight plan forms for private aircraft.

* Films: "Airplane Trip by Jet"; "Man in Flight"; "A Traveler Meets Air Traffic Control"

* Filmstrips: "Modern Flight"; "Transportation by Air"; "Safety Helpers"

* Book: "How To Design and Fly Models"

* Aviation Rules and Regulations

** Highway Map Comparison Chart

** Aviation Glossary

Also visit a control tower and flight plan forms can be obtained from a local FAA Flight Service Station.

6-8 Organize a classroom debate around the proposition:
Resolved that jet airports be built near populated areas. Prepare a case for both sides. Analyze resulting community advantages and problems. Utilize statements and rationale expressed by authorities, data gathered on similar situations and existing and projected community needs.

* Films: "The Human Factor"; "Mrs. Cook Flies for Your Safety"; "Where Am I?"

* Filmstrips: "Jet Age Flight"; "Jet Age Geography in the U.S.A."; "Airplanes in Flight"

Invite a speaker to talk about aviation rules, etc. Employees of the FAA are often available.

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tion that may arise in the future such as:

Location of airport
Size of airport
Traffic problems
Sound level
Speed of aircraft

Explore the reasons students have for predicting each problem. Discuss possible solutions uncovered in the research.

* Book: "Flight Today and Tomorrow"
* Booklet: "Transport Technology: The Decade Ahead"
* Films: "A Place to Land"; "Airports in Perspective"; "Before Saturn"; "The Best Investment We Ever Made"; "Break-Through"; "Groundwork for Peace"; "Man Encounters Mars"; "The New Giant"; "The Shape of Things to Come"; "The Sky Is No Limit"; "Wings for Adventure"; "Your Shape in Space"

6-8 Discuss the major developments in aviation. Discuss the improvement in airplanes such as seating capacity, speed, ability to fly in bad weather, radio and radar, and materials. How do these affect the airports being used?

* Article: "Future of Aviation Computerized One Way – UP"
* Write: General Aviation Manufacturers Association for airport material.
* Film: "It Pays to Stay Open"

6-8 Imagine and illustrate futuristic designs of aircraft and aviation facilities emphasizing technological advancements such as:

Airport facilities (parking, baggage, restaurants, shops, waiting areas, information)

Airplanes (design, capacity, uses)

Airports (runways, traffic patterns, scheduling)

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* Films: "The Reliability Story"; "The 747 Story"

6-8 Construct a graph to show changes in the number of flights offered at different times of the day, week, and year (e.g., more scheduled flights early and late in the day, on weekends, and during summer months). Develop hypotheses on the "law of supply and demand" for airlines. Also, note where people go during different times of the year.

* Film: "You and Me and the SST"

Write airlines for route maps and schedules.

7-8 Discuss on a panel the reasons why airmail and air freight are central to the international import-export business.

Identify specific items that must be imported or exported and show why a balance is essential.

Discuss differences in air mail charges from country to country.

Prepare master chart of U.S. air shipments for 10-30 countries in and out – also for foreign products. Ask: What are some goods which England imports by air? What are some exports by air? Why does England not import these products (list)? What about products imported but not by air? Why do some countries use aviation a great deal while others use air shipments less often or not at all?

Have students check suppositions in encyclopedias and geography books.

* Films: "Air Age All Around Us"; "The Seven League Step Into Tomorrow"

7-8 Committee reports covering the topic:

"How has aviation affected isolated world communities?" (e.g., tourism, raw materials, airports, import-export trade). Ask each student to research one country.

* Consult World Aviation Directory or I.C.A.O. for countries.

SOCIOLOGY

6-8 With the class divided into three committees, research the transportation and communication facilities in Europe, Asia, and Latin America. Compare the ways in which air transportation and communication facilities have affected these three parts of the world (e.g., dress, foods, language, etc.).

* Write to airlines, A.T.A., and I.A.T.A.
* Write to ICAO for information folders and descriptions
* Write FAA for related material

7-8 Analyze and discuss the reciprocal effect that the aviation industry has had on the development of a modern technological society in the U.S. (e.g., dispersing industry and business from large cities, development of larger sales territories, new careers and new technologies).

** Booklet: "What Are You Going To Do With the Next Half Century?"
* Filmstrips: "Aviation as a Career – Transportation"; "Aviation as a Career – Manufacturing"

7-8 Using research, identify trends in aviation problems. Interpret existing problems and predict future problems such as:

Stacking of airplanes at large airports
Distance from airport and ground traffic hampering access
Airport noise and sonic booms
Larger aircraft

* Books: "Transportation in Today's World"; "Flight Today and Tomorrow"
* Films: "Air Transportation"; "Air Transportation – Passenger"; 'Fundamentals of Approach Control"
* Study Print: "History of Aviation"
* F.A.A. Teacher Guide: "SST-T-T"

8 Discuss the need of a common communications system in aviation. Explain the use of the international phonetic alphabet

NOTES:

ECONOMICS

* Films: "Airplane Changes our World Map"; "Transportation in a Modern World"; "Our Shrinking World"; "International Skies"

** Films: "Transportation in the Modern World"

7-8 Collect want ads showing a demand for human resources in modern American industry. Write your own classified section and job descriptions for opportunities related to the aviation industry.

* Write to personnel departments of airlines and industries.

** Booklet: "What Are You Going To Do With the Next Half Century?"

* Booklets: Write to General Aviation Manufacturers Association for Library of Aviation Careers Series.

* Filmstrip: "Aviation – Where Career Opportunities Are Bright"

7-8 Have students resolve a problem situation concerning the effect of modern aviation on an American business. Examples:

"You are in the fishing business in Alaska. You own a number of boats. You have a cannery. You are contacted by a businessman who is going to open a chain of five seafood restaurants throughout the U.S. He wants to serve fresh seafood in season. It must not be frozen. How would you get it to him? Interview an Air Freight representative, aircraft sales and leasing dealer, and restaurant owner. Consider costs and advantages of various ways of flying the seafood."

"Examine possibilities for a salesman who covers a large territory and drives 4,000 miles per month or a singing group on a tour of 50 cities and a yearly coast to coast travel schedule."

7-8 Research the topic: "What major changes will be made by the jumbo jets and the SST's on travel and transportation patterns?"

SOCIOLOGY

in facilitating communication. Identify the systems for communicating between airplanes or from airplane to control tower (e.g., radio, lights, signs, aviation rules).

Identify reasons for communication (e.g., traffic, weather, runway conditions, emergency situations, etc).

Use the information gathered on the phonetic alphabet, identification numbers and communication format to demonstrate a dialogue for takeoff, flight, and landing of the airplane.

* Films: "Record of a Flight"; "Take the High Road"; "Traveler Meets Air Traffic Control"

* International Alphabet

* Aviation Rules and Regulations

** Aviation Glossary

* I.C.A.O. information folders

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Use Reader's Guide, interviews or letters to airlines and to airport managers.

7-8 Have students make a fan chart to trace the beginning of a development or a service in aviation which is the basis for other goods and services (e.g., commercial flights – flight insurance, special luggage, auto leasing. Hotels. Sport flying – skydiving, restoring old airplanes, flying gliders, aerobatic flying).

Form students into buzz groups and allow 20 minutes to list as many developments as possible.

7-8 Organize a public forum or "town meeting." Class members assume rolls of representatives of specific community organizations confronting an issue involving aviation (e.g., deciding on a new local airport, need for air taxi service, or creating an industrial park on the airport).

Representatives should include Chamber of Commerce, Aircraft dealer, airport manager, FAA, state aviation office, businesses and airlines.

7-8 Chart the fluctuation of the cost of stocks for an aviation industry as compared to the gross national product.

Use newspaper and Fortune Magazine top 500 annual report as resource. Also use annual reports from selected companies as basis for performance reports.

Organize an air transportation stock club and pool resources for stock purchase during school term.

CESSNA/AMERICAN AIR AGE MATERIALS FOR ELEMENTARY TEACHERS

CESSNA – AMERICAN AIR AGE MATERIALS FOR ELEMENTARY TEACHERS

This box of materials was prepared to be used in teaching about aviation in social studies and science. It contains:

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- Resource Lists
- Special Order Forms

Five booklets describing how airplanes are built and used:

"Flying Machine: First Cousin to the Bird"; "The Magic of Making Airplanes"; "The Flying Bug and How it Bites"; "What Are You Going To Do With The Next Half Century"; "Come Fly With Us"

Cloud Chart

Gas Turbine Engine Chart

Map Comparison Chart

Parts of an Airplane Chart

Airplane Instrument Panel Chart

Color Pictures (8½ x 11) of Airplanes

Compass Rose Game

Plastic Airplane Model with Moveable Control Surfaces

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NUMBER OF KIT(S) _____ **AT $4.95 EACH**

CHECK ENCLOSED FOR $ _____

APPENDIX

AIRLINE AND ASSOCIATION ADDRESSES

Air Transportation Association (ATA)
1000 Connecticut Avenue, N.W.
Washington, D.C. 20036

International Air Transport Association (IATA)
1155 Mansfield Street
Montreal 113, P. Q., Canada

Allegheny Airline
Hangar 12
National Airport
Washington, D.C. 20001

Aerolineas Peruanas
P.O. Box 1006
International Airport Branch
Miami, Florida 33148

American Airlines
633 3rd Avenue
New York, N. Y. 10017

British Overseas Airways Corp.
245 Park Avenue
New York, N. Y. 10017

Continental Airlines
International Airport
Los Angeles, California 90009

Delta Air Lines, Inc.
Atlanta Airport
Atlanta, Georgia 30320

El Al Israel Airlines
850 3rd Avenue
New York, N. Y. 10022

Flying Tiger Line
International Airport
Los Angeles, California 90009

Frontier Airlines
5900 E. 39th Avenue
Denver, Colorado 80207

Iberia Airlines of Spain
518 5th Avenue
New York, N. Y. 10036

Irish International Airlines
546 5th Avenue
New York, N. Y. 10036

Japan Airlines
240 Stockton Street
San Francisco, California 94108

K. L. M. Royal Dutch Airlines
K. L. M. Building
609 5th Avenue
New York, N. Y. 10017

Lufthansa German Airlines
410 Park Avenue
New York, N. Y. 10022

Pan American World Airways
Pan Am Building
New York, N. Y. 10017

Philippine Airlines, Inc.
200 Stockton Street
San Francisco, California 94108

Trans World Airlines
Air World Education
605 Third Avenue
New York, N. Y. 10016

United Airlines
School and College Service
P.O. Box 66141
Chicago, Illinois 60666

Western Air Lines
6060 Avion Drive
P.O. Box 92005 – Airport Station
Los Angeles, California 90009

AVIATION PIONEERS

Alcock, Sir John William
(1892-1919)
Considered one of the best pilots in Britain's Royal Flying Corps during World War I.

Blanchard, Jean-Pierre
(1753-1809)
First to fly across the English Channel in a balloon, 1785. He was accompanied by Dr. John Jeffries.

Bleriot, Louis
(1872-1936)
A French aviation pioneer, made the first flight across the English Channel in an airplane, July 25, 1909.

Boeing, William Edward
(1891-1956)
An American businessman executive and aircraft manufacturer who established the Boeing Aircraft Company in 1916.

Cayley, Sir George
(1773-1857)
An Englishman, often called the "Father of Modern Aeronautics." He contributed many ideas to the early history of aviation.

Cessna, Clyde
(1880-1954)
Developed the fully cantilevered wing. First person to build and fly an airplane west of the Mississippi and east of the Rockies. Founded Cessna Aircraft Company in 1927.

Chanute, Octave
(1832-1910)
An American civil engineer who became famous as a scientific student of gliding.

Curtiss, Glenn
(1878-1930)
An American inventor who became a successful manufacturer of airplanes during World War I.

Da Vinci, Leonardo
(1452-1519)
Was one of the greatest artists of the Italian Renaissance and the greatest experimental scientist of his age. He sketched flying machines based on the way birds fly.

DaHavilland, Geoffrey
(1882-1965)
Designed the first fighter plane in 1912.

Da Rozier, Francoise Pilatre
(1756-1785)
A French balloonist who made the first flight in a captive-hot-air balloon, 1783.

Doolittle, James
(1896-)
A noted American flier who led the first bombing raid of Tokyo in World War II.

Douglas, Donald
(1892-)
An American aircraft manufacturer who organized the Douglas Company in 1922. He designed the army plane that made the first flight around the world in 1924.

Earhart, Amelia
(1897-1937)
An American, was the first woman to cross the Atlantic Ocean by air and the first woman to receive the Distinguished Flying Cross in 1932.

Eiffel, Alexandre
(1832-1923)
Was a French structural and aeronautical engineer.

Fairchild, Sherman M.
(1896-)
An American inventor and businessman who has been the "Father of Aerial Mapping Photography." He developed the FC-1 and FC-2 planes, the first to have enclosed cockpits.

Farman, Henri
(1874-1934)
A Frenchman who made the first night flight in 1910.

Giffard, Henri
(1825-1882)
A French engineer who was the first man to successfully combine an engine of sufficient power with a balloon that could be steered, 1852.

Henson, William S.
(1812-1888)
British-American aviation pioneer who designed the "Aerial Steam Carriage" in 1842.

Hughes, Howard Robard
(1905-)
An American who won fame as a businessman, motion-picture producer and aviator. As an aviator he set many speed records. He founded Hughes Aircraft Corporation.

Jeffries, Dr. John
(1745-1819)
Took part in the first flight across the English Channel in a balloon in 1785.

Junkers, Hugo
(1859-1935)
A German airplane designer and manufacturer who patented a "flying wing" monoplane with no fuselage, 1910.

Langley, Samuel
(1834-1906)
An American astronomer, physicist, and pioneer in aeronautics. He built a man-carrying "aerodrome" in 1903.

Lilienthal, Otto
(1848-1896)
A German who was the first to develop and fly successful gliders. Beginning in 1891, he made more than 2,000 glider flights.

Lindbergh, Charles
(1902-)
An American aviator who made the first solo flight across the Atlantic Ocean in 1927.

Lockheed, Allan and Malcolm
(1889-1969) & (1887-1958)
American businessmen who founded Lockheed Aircraft Corporation.

Martin, Glenn
(1886-1955)
An American aircraft designer and manufacturer who was one of the best known flyers in the United States.

Maxim, Sir Heran S.
(1840-1916)
An Englishman who experimented with internal combustion engines for airplanes. He tested a steam-powered airplane that actually lifted itself off the ground, 1894.

Montgolfier Brothers
Jacques Etienne
(1745-1799)
Joseph Michael
(1740-1810)
Frenchmen who invented the first balloons to carry men into the air, 1783.

Northrop, John K.
(1895-)
An American self-taught engineer who founded his own aircraft company in the 1920's.

Oberth, Hermann
(1894-)
One of two men who earned the title "The Father of Space Flight." (Robert H. Goddard was the other.) He published a book in 1923 illustrating future space craft.

Penaud, Alphonse
(1850-1880)
A Frenchman who built helicopter models powered with rubber bands in the 1870's.

Phillips, Horatio
(1845-1912)
An English aeronautical pioneer who experimented in the field of wind tunnels and airfoils.

APPENDIX

Piper, William
(1881-1970)
Founder of the Piper Aircraft Company.

Post, Wiley
(1900-1935)
An American who made the first solo flight around the world in 1933.

Quimby, Harriett
(1884-1912)
An American who became the first licensed woman pilot in the United States in 1911.

Rickenbacker, Edward Vernon
(1890-)
Was the leading American air ace in World War I. He shot down 22 enemy planes.

Sikorsky, Igor
(1889-)
A Russian aviation pioneer in helicopters and transoceanic flying boats.

Smith, C. R.
(1899-)
Founder and former Chief Executive Officer of American Airlines. Former U.S. Secretary of Commerce and was also instrumental in organizing the Army Air Transport Command during World War II.

Von Opel, Fritz
(1899-)
A German who flew the first rocket-powered plane in 1929.

Von Zeppelin, Count Ferdinand
(1838-1917)
Was a famous German pioneer in lighter-than-air craft.

Wenham, Francois
(1824-1908)
A British engineer who designed an apparatus consisting of a steam-driven fan which flew air over a model mounted in a tunnel, 1871.

Wright Brothers
Wilbur (1867-1912)
Orville (1871-1948)
They invented and built the first successful airplane in 1903.

Yeager, Charles
(1923-)
The man who piloted the first manned aircraft to exceed the speed of sound, 1947.

NOTES:

A SYNOPSIS OF AVIATION RULES AND REGULATIONS

Rules for Airplane Certification

1. No person may operate an aircraft unless it is in an airworthy condition.
2. The pilot in command is responsible for determining whether that aircraft is in safe condition.
3. The pilot must comply with the operating limitations for that aircraft (e.g., acrobatics allowed in only specific aircraft).
4. Aircraft must have proper instrumentation and equipment.
   a. Airspeed indicator
   b. Altimeter
   c. Magnetic compass
   d. Tachometer
   e. Oil pressure gauge
   f. Oil temperature gauge
   g. Fuel gauges for each tank
   h. Approved safety belts
   i. Position lights
   j. Electrical energy source
   k. Spare set of fuses
   l. Adequate radio (transmitter, receiver) for controlled airports
5. Every aircraft must have a complete inspection each 12 months which includes engine, air frame, instrumentation and radio checks. This must be signed by a government authorized mechanic who is responsible for air worthiness.
6. Each aircraft used for hire or instruction must have a periodic check every 100 hours of flight time.
7. The owner or operator of an aircraft must keep a current and permanent record of maintenance for that aircraft.
8. The owner of an aircraft must maintain his aircraft in compliance with mandatory service bulletins and air worthiness directives.

Rules for Pilot Certification

A. General

1. No person may fly an aircraft unless he has a current pilot certificate.
2. No person may be issued a pilot's certificate unless he passes a thorough medical examination.
3. No pilot may fly an aircraft under instrument conditions unless he has a current instrument rating.
4. The private pilot license is issued without a specific expiration date.
5. The student pilot license is limited to 24 months.
6. There are three basic types of pilot certificates: private, commercial, and airline transport.
7. Class rating of pilot certificates are as follows:
   single-engine land
   multi-engine land
   single-engine sea
   multi-engine sea
   rotor craft
   glider
   lighter-than-air
8. In order to obtain a pilot's license, a person must pass both a written and a flight test.
9. Pilots working toward experience requirements must record their flight time in a log book. All airline pilots **must** do this. Private pilots not working toward experience requirements are not required to do this.
10. Private pilot medical certificates are issued for 24 months — Airline pilots for 6 months.
11. Pilots carrying passengers must have flown an airplane within the preceding 90 days.

B. Student Pilots

1. Student pilots of airplanes must be 16 years of age — glider pilots 14 years old.
2. In order for solo flight, a person must be familiar with visual flight rules and be passed by his instructor in all areas of basic flight.

C. Private Pilots

1. Private pilots of airplane must be 17 years old, 16 years for a glider, and 18 years for lighter-than-air.
2. Before a person may be issued a private pilot's license, he must:
   a. Hold a student pilot's certificate.
   b. Have a total of at least 40 hours of flight instruction and solo flight time.
   c. Have at least 20 hours of solo flight time.
   d. Have at least 10 hours of solo cross-country flight time.
   e. Pass a written test on procedure and regulations.
   f. Pass a flight test on procedure and regulations.
3. Pilots obtaining an instrument rating must have:
   a. A commercial license or 200 hours of flight time.
   b. At least 40 hours of instrument time under weather conditions or simulated instrumented conditions.
   c. Pass a written and flight test on instrument procedures and knowledge.

D. Commercial Pilots must have logged 200 flight hours and pass both a written and flight test.

E. Airline Pilots must have at least 1200 hours logged and pass written and flight tests.

Rules for Flight

A. General

1. All pilots **must** follow the aviation rules and regulations as stated in the Federal Aviation Regulations.
2. The pilot is the final authority as to the operation of that aircraft.
3. The pilot must check the aircraft before flight.
4. Each flight crewmember (including the pilot) must keep his seat belt fastened while flying.
5. No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another.
6. No person may operate an aircraft while under the influence of drugs or intoxicating liquor.
7. No person may drop any object out of an aircraft that would endanger life or property.
8. No person may make a flight unless there is ample fuel supply aboard.

B. Visual Flight Rules (V.F.R.)

1. No person may operate an aircraft so close to another aircraft as to create a collision hazard.

2. No person may operate an aircraft in formation flight unless previous arrangements with the other aircraft have been made.
3. No person may operate an aircraft carrying passengers for hire, in formation flight.
4. An aircraft in distress has the right of way over all other air traffic.
5. When aircraft are converging at the same altitude (except head on) the aircraft to the right has the right of way.
6. When aircraft are approaching each other head on, each pilot shall alter his course to the right.
7. The pilot overtaking another aircraft shall alter his course to the right to pass well clear.
8. Aircraft on final approach have the right of way over all other aircraft, except an aircraft in distress.
9. Each person operating an aircraft on the water shall keep clear of all vessels and avoid impeding their navigation and give right of way as in the air.
10. No person may operate an aircraft in acrobatic flight over any congested area of a city, over any assembly of persons, below an altitude of 1500 feet or when visibility is less than 3 miles.
11. No person may operate an aircraft at night without proper position lights.
12. No person may fly an aircraft so low as to make an emergency landing impossible.
13. Minimum safe altitude is 1000 feet over congested areas or cities.
14. Minimum safe altitude is 500 feet over populated areas. Over open water or sparsely populated areas, there is no minimum, but aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.
15. A flight plan for visual flight is always recommended but not required. Flight plans for instrument flight are mandatory.
16. No person may operate an aircraft within an airport traffic area except for the purpose of landing or taking off.
17. No person may operate an aircraft within an airport traffic area at more than 156 knots (180 mph) for regular aircraft or 200 knots (230 mph) for jets. No person may operate an aircraft below 10,000 ft. MSL at more than 250 knots (288 mph).
18. An aircraft landing or taking off at a radio controlled airport must be in constant radio contact with the control tower and comply with the directions given by him.
19. When landing at an airport, the pilot must make left turns for his approach unless directed to do different.
20. F.A.A. approach patterns and minimum altitudes must be followed at each airport.
21. No person may operate an aircraft within a disaster area (2000 ft. above the surface and 5 miles away) unless he has permission from the F.A.A.
22. No person may flight test an aircraft over populated areas.
23. No person may operate an aircraft within controlled air space when the ceiling is less than 1000 ft. and visibility is less than 3 miles.
24. When a person has received appropriate A.T.C. (air traffic control) clearance, he may fly with one mile visibility and clear of clouds. This is called Special VFR.
25. Aircraft flying in an easterly direction and at least 3000 ft. above the surface must fly at altitudes of odd thousands and 500 ft. (e.g., 3,500; 5,500; 7,500; etc.).
26. Aircraft flying in a westerly direction and at least 3000 ft. above the surface must fly at altitudes of even thousands and 500 ft. (e.g., 4,500; 6,500; 8,500; etc.).
27. No person may land at a military airport unless in emergency or pre-arranged with the F.A.A.

C. Instrument Flight Rules (I.F.R.)

1. No person may operate an aircraft under IFR (instrument flight rules) unless he has filed an IFR flight plan and received an appropriate ATC (air traffic control) clearance.
2. No pilot may fly in IFR conditions unless he has an instrument rated certificate and is current in the aircraft being flown.
3. Aircraft flying in instrument conditions fly at odd thousand feet in an easterly direction or even thousand feet in a westerly direction (e.g., 4,000 – west; 5,000 – east, etc.).
4. No person may land or take off at an airport under IFR conditions in less than the prescribed weather minimum for that airport.
5. Under IFR, no person may operate an aircraft less than 1,000 feet above the surface or 2,000 feet over mountains.
6. The pilot, under IFR, shall continuously keep tuned to the appropriate radio frequency and shall make regular position reports.

D. Emergency Rules

1. In an emergency requiring immediate action, the pilot may deviate from any rule.
2. When landing at a controlled airport and the radio fails, the pilot must maintain visual contact with the control tower and remain in the traffic pattern until he is given a light signal to land.
3. If radio failure occurs during IFR conditions, the pilot must continue the flight as planned, landing as soon as visually possible. If this is impossible, the original flight plan and time must be followed. (ATC will follow the flight on radar.)
4. In the advent of engine failure, the pilot should make every attempt to land where life and property will not be jeopardized. (e.g., fields, dry river beds, open highways).
5. Emergency radio frequency is 121.5 megaherz.

APPENDIX – BOOKS, BOOKLETS, PERIODICALS AND ARTICLES

Title	Author	Level	Publisher	Published
About the Airplane at the Airport	Stuart, Merrie	1-4	Melmont	1958
About Clouds	McGrath, Thomas	K-4	Melmont	1959
About Our Weather	Gibson, Gertrude	1-4	Melmont	1960
About the Pilot of a Plane	Chace, Haile	K-5	Melmont	1959
Aerospace Pilot	Coombs, Charles I.		Morrow	1964
Aircraft Aircraft	Taylor, John W. R.	5 up	Hamlyn (London)	1967
Air Drop, Men, Weapons and Cargo by Parachute	Colby, Carroll B.	6-8	Coward	1953
Air Is All Around You	Branley, F. M.	1-3	Crowell	1962
Air Transport and Its Regulators	Caves, Richard E.	Teacher	Harvard	1962
Air War Against Hitler's Germany	Sears, Stephen W.	U	Harper	1964
Aircraft and How They Work	Gottlieb, William	3-6	Doubleday	1959
Aircraft at Work	Elting, Mary	6-9	Harvey	1964
Aircraft of World War I	Colby, Carroll B.	I-U	Coward	1962
Airplane at the Airport, The	Stuart, Merri	K-3	Melmont	1958
Airplanes and How They Work	MacFarland, Kenton D.	5-7	Putnam	1966
Airport, Our Link to the Sky, The	Howen, Robert S.	3-9	Whitman	1961
Around the Corner, "Big Fellow and the Airplane"	Russell, David	2	Ginn	1966
Around the Corner, "Flying Fireman, The"	Russell, David	2	Ginn	1966
Around the Corner, "Happy the Helicopter"	Russell, David	2	Ginn	1966
Around the Corner, "Peter and the Pilot"	Russell, David	2	Ginn	1966
At Home Around the World	Goetz, Delia	I-U	Ginn	1965
At the Airport	Colonius, Lillian	K-3	Melmont	1954
Aviation From the Ground Up	Floherty, John	6-9	Lippincott	1960
Aviation and Space Medicine	Caidin, Martin	8	Dutton	1962
Balloons Fly High	Poole, Lynn	I-U	McGraw	
Balloons: From Paper Bags to Sky Hooks	Burchard, Peter	5 up	MacMillan	
Big Bird Flight Story, The	Air World Education	I-U	Trans World Airlines	1970
Boy's Life of the Wright Brothers	Charnley, Mitchell V.	9 up	Harper	1928
Bomber Planes That Made History	Cooke, David C.	I-U	Putnam	1959
Bridle for Pegasus, A	Shippen, Katherine B.	I-U	Viking	1951
Bush Flying in Alaska	Coombs, Charles I.	I-U	Morrow	
Cave Man to Space Man	Friskey, Margaret	5 up	Children's Press	1961
Civil Aviation and Peace	Van Zandt, J. Parker	Teacher	Brookings	1944
Come to Work With Us in an Airport	Wilkinson, Jean	K-3	Sextant	1970
Complete Book of Helicopters, The	Ahnstrom, D. N.	P-I-U	World	1967
Complete Book of Jets and Rockets, The	Ahnstrom, D. N.	6-9	World	1959
Dirigibles That Made History	Cooke, David C.	5 up	Putnam	1962
Discovering Aerospace	Pacilio, James	I-U	Children's Press	1965
Experiments with Airplane Instruments	Beeler, Nelson	7-8	Crowell	1953
Falcons of France	Nordhoff, C.	I-U	Little	1929
Federal Control of Entry into Air Transportation	Keyes, Lucile Shepard	Teacher	Harvard	1951
Fighter Planes that Made History	Cooke, David C.	I-U	Putnam	1958
First Book of Aircraft Carriers, The	Icenhower, Joseph B.	I-U	Watts	1964
First Book of Airplanes, The	Bendick, Jeanne	I-U	Watts	
Flight	Stever, H. Guyford Haggerty, James J.	6 up	Time, Inc.	1967
Flight Today and Tomorrow	Hyde, Margaret	5 up	McGraw	1962
Flights That Made History	Cooke, David C.	5 up	Putnam	
From Flying Horse to Man in the Moon	De Leeuw	9 up	St. Martins	1963
From Kite to Kitty Hawk	Bishop, Richard W.	5 up	Crowell	1958
Gliders	Kettelkamp, Larry	P	Morrow	1961
Great American Fighter	Loomis, Robert D.	I-U	Random House	1961
Great Flights and Air Adventures From Balloons to Spacecraft	MacMillan, Norman	9 up	St. Martins	
Helicopters Work Like This	Arkell, Basil	I-U	Roy	
Heroes of the Skies	Hoyt, Edwin	6-8	Doubleday	1963
Historic Models of Early America and How to Make Them	Maginley, C. J.	I-U	Harcourt	1947

APPENDIX – BOOKS, BOOKLETS, PERIODICALS AND ARTICLES

Title	Author	Level	Publisher	Published
History of Flight, The	Eimeral, Sarel	5 up	Golden Press	
How to Design and Build Flying Models	Laumer, Keith	6-8	Harper	1960
How Do You Travel	Schlein-Miriam	K-3	Abingdon	
How a Jet Flies	Paust, Gilbert H.	I-U	Sterling	1962
How and Why Wonder Books of Flight, The	Highland, Harold J.	2-6	Grosset	1961
I Want to be an Airplane Hostess	Greene, Carla	K-3	Children's Press	1960
I Want to be an Animal Doctor	Greene, Carla	K-3	Children's Press	1956
I Want to be a Bus Driver	Greene, Carla	K-3	Children's Press	
I Want to be a Carpenter	Greene, Carla	K-3	Children's Press	1959
I Want to be a Coal Miner	Greene, Carla	K-3	Melmont	1957
I Want to be a Dentist	Greene, Carla	K-3	Children's Press	1960
I Want to be a Dairy Farmer	Greene, Carla	K-3	Children's Press	1957
I Want to be a Fireman	Greene, Carla	K-3	Children's Press	
I Want to be a Homemaker	Greene, Carla	K-3	Children's Press	1961
I Want to be a Librarian	Greene, Carla	K-3	Children's Press	1960
I Want to be a Mechanic	Greene, Carla	K-3	Children's Press	1959
I Want to be a News Reporter	Greene, Carla	K-3	Children's Press	1958
I Want to be a Nurse	Greene, Carla	K-3	Children's Press	1957
I Want to be a Pilot	Greene, Carla	K-3	Children's Press	1957
I Want to be a Road Builder	Greene, Carla	K-3	Children's Press	1958
I Want to be a Storekeeper	Greene, Carla	K-3	Children's Press	1958
I Want to be a Teacher	Greene, Carla	K-3	Children's Press	1957
I Want to be a Train Engineer	Greene, Carla	K-3	Children's Press	1956
I Want to be a Truck Driver	Greene, Carla	K-3	Children's Press	1958
I Want to be a Zoo Keeper	Greene, Carla	K-3	Grosset	1960
Illustrated Space Encyclopedia	Bergaust, Erik	I-U	Putnam	1965
In Their Honor	Feeny, William D.	I-U	Meredith	1963
Jet Pilot	Lent, Henry B.	6-8	MacMillan	1959
Jet Pioneer	Heiman, Grover	I-U	Meredith	1963
Jungle in the Sky	Puccinelli	I-U	Putnam	1963
Junior Airman's Book of Airplanes	Davis, Clive E.	5-8	Dodd	1958
Junior Science Book for Flying	Feravolo, Rocco V.	6-8	Garrard	1960
Learning About Our Neighbors	Wann, Kenneth D.	K-3	Allyn	1965
Let's Find Out About Safety	Shapp, Martha	K-2	Watts	1964
Let's Go to the Airport	Sootin, Laura	1-4	Putnam	1957
Little Airplane, The	Lenski, Lois	K-5	Walck	1938
Little Auto, The	Lenski, Lois	K-5	Walck	1934
Loopy	Gramatky, H.	P	Hale	
Magnificent Men in Their Flying Machine, The	Searle, Ronald	I-U	Norton	1965
Making of a Pilot, The	Richter, Ed.	6-8	Westminster	1966
Mommy's at Work	Merriam, Eve	K-3	Knopf	1961
My Book of Transportation	Nelson, Mary E.	K-3	Ottenheimer	1961
My Family	Schlein	K-3	Abelard	
New York to Rome; Jet Flight 808	Stevens, Leonard A.	I-U	Harper	1962
Next Fifty Years of Flight, The	Balchen, Bernt	I-U	Viking	1960
Our Big World	Barrows, Harlan H.	I-U	Burdett	1964
Our Neighborhood	Fraser, Dorothy M.	K-3	American Book	1961
Our Space Age Jets	Colby, Carroll B.	I-U	Coward	1960
Pioneers of Flight	Wallhauser, Henry T.	5 up	Hamond	1969
Planes and How to Draw Them	Hogeboom, Amy	U	Vanguard	1956
Racing Planes That Made History	Cooke, David C.	6-9	Putnam	1960
Real Book About Airplanes, The	Whitehouse, Arch	6-8	Doubleday	1961
Red Light, Green Light	MacDonald, Golden	K-2	Doubleday	1944
Regulation and Competition in Air Transportation	Richmond, S. B.	Teacher	Columbia	1961
Rescue From the Air and in Space	Sparks, James		Dodd	1963
Ride on the Wind	Dalgliesh, Alice	3-5	Scribner	1956
Roads to Everywhere "Benjie and the Pilot"	Russell, David		Ginn	1966
Roads to Everywhere "Cockpit in the Clouds"	Russell, David	4	Ginn	1966
Roads to Everywhere "The Chopper"	Russell, David	4	Ginn	1966
Rocket Aircraft, U.S.A.	Bergaust, Erik	6-8	Putnam	1961

APPENDIX – BOOKS, BOOKLETS, PERIODICALS AND ARTICLES

Title	Author	Level	Publisher	Published
Safer Skyway Federal Control of Aviation	Whitnah, Donald	Teacher	Iowa State	1967
Saga of Flight from Lionardo Da Vinci to the Guided Missile, The	Duke, Neville	5 up	Avon	1964
Seaplanes That Made History	Cooke, David C.	5 up	Putnam	1963
Seven Came Through	Rickenbacker, Edw. V.	I-U	Doubleday	1943
Skyblazers: Your Career in Aviation	Neal, Harry E.	6-8	Messner	1958
Story of Amelia Earhart, The	De Leeuw, Ada	5 up	Grosset & Dunlap	1955
Story of America – Transportation	Cain, Wilma W.	K-5	Fideler	1964
Story Behind Great Inventions, The	Montgomery, Elizabeth	6-8	Dodd	1944
Story of the U.S. Air Force	Loomis, Robert D.	I-U	Random House	1959
Test Pilot	Caidin, Martin	8	Dutton	
Test Pilots	Gurney, Gene	6	Watts	1962
Tommy Learns to Fly	Lewellen, John	3-4	Crowell	1956
Trails to Treasure "Amelia Earhart"	Russell, David		Ginn	1966
Trails to Treasure "Danny Dunn and the Anti-Gravity Machine"	Russell, David	6	Ginn	1966
Trails to Treasure "Faster Than Sound"	Russell, David	6	Ginn	1966
Trails to Treasure "A Girl Who Loved the Stars"	Russell, David	5	Ginn	1966
Transport Planes That Made History	Cooke, David C.	I-U	Putnam	1959
Transportation in Today's World	Ress, Etta S.	I-U	Creative Ed.	1965
True Books of the Policeman & Fireman	Miner, Irene	K-3	Children's Press	1954
We Were There at the First Airplane Flight	Sutton, Felix	I-U	Grosset & Dunlap	1960
Who, Me Fly?	Robert Scharff	U	Cessna Aircraft Co.	1966
Who Really Invented the Airplane	Cooke, David	5-7	Putnam	1964
World Around the World	Jackson, Kathryn	I-U	Burdett	1965
Wright Brothers, The	Reynolds, Quentin	I-U	Random House	1950
Wright Brothers, Pioneers of American Aviation, The	Reynolds, Quentin	3-8	Random House	1950

Booklets:

Facts About Learning to Fly	Cessna Aircraft Co.	U	Cessna Aircraft Co.	1969
Fly-It-Yourself is a Family Affair	Cessna Aircraft Co.	U	Cessna Aircraft Co.	1969
Challenge: Learning to Fly, The	Cessna Aircraft Co.	U	Cessna Aircraft Co.	1969
Why Did Doc Sell Dobbin?	Cessna Aircraft Co.	U	Cessna Aircraft Co.	1969

Periodicals:

Air Progress, 420 Lexington Ave., New York, N. Y. 10017. Monthly. News about all phases of the industry and articles of general interest to pilots. Upper Elementary.

Invitation to Flying. One Park Avenue, New York, N. Y. 10016. Annually. Compilation of articles on all aspects of flying including a section on careers. Upper Elementary.

Articles:

Future of Aviation Computerized One Way – Up	Cessna Air Age Ed.	All	Cessna Aircraft Co.	1970

INTERNATIONAL PHONETIC ALPHABET

A	Alfa	(Al-fah)	N	November	(No-vem-ber)
B	Bravo	(Brah-voh)	O	Oscar	(Oss-cah)
C	Charlie	(Char-lee)	P	Papa	(Pah-pah)
D	Delta	(Dell-tah)	Q	Quebec	(Keh-beck)
E	Echo	(Eck-oh)	R	Romeo	(Row-me-oh)
F	Foxtrot	(Foks-trot)	S	Sierra	(See-air-rah)
G	Golf	(Golf)	T	Tango	(Tan-go)
H	Hotel	(Hoh-tell)	U	Uniform	(You-nee-form)
I	India	(In-dee-ah)	V	Victor	(Vik-tah)
J	Juliett	(Jew-lee-ett)	W	Whiskey	(Wiss-key)
K	Kilo	(Key-loh)	X	Xray	(Ecks-ray)
L	Lima	(Lee-mah)	Y	Yankee	(Yang-key)
M	Mike	(Mike)	Z	Zulu	(Zoo-loo)

APPENDIX

OTHER RESOURCES

American Family Enterprises 380 E. Green St. Pasadena, California 91101	Above and Beyond: The Encyclopedia of Aviation and Space Sciences – 15 volumes covering all subjects related to Aerospace – Volume 15 is a teacher resource edition.
Coast and Geodetic Survey Distribution Division C-44 4200 Connecticut Avenue Washington, D. C. 20235	Aeronautical Charts & Global Concepts
Federal Aviation Administration (FAA) Film Library, AC-921 P.O. Box 25082 Oklahoma City, Oklahoma 73125	Film Catalog (Catalog of films for free loan)
Federal Aviation Administration (FAA) Office of General Aviation Affairs Washington, D. C. 20590	Teacher Guides (SST-T-T), resource lists, information services
General Aviation Manufacturers Assn. Suite 1200-A 1025 Connecticut Ave., N.W. Washington, D. C. 20036	Information about general aviation, airports, teacher resources, career library series.
International Civil Aviation Org. (ICAO) International Aviation Building 1080 University Street Montreal 3, P.Q., Canada	"ICAO – What it is, What it does, How it works." (pamphlet) "Air Age Education" (International Teacher Kit) "Exhibition Picture Set" "ICAO Bulletin" (monthly magazine)
Kansas Commission on Aerospace Education 120 East Tenth Topeka, Kansas 66612	Aerospace Bibliography and Resource Guide, 1965-1970
National Aerospace Education Council (NAEC) 806 15th Street, N.W. Washington, D. C. 20005	LOOK TO THE SKY, $.50 each, Reading Readiness book for primary grades AVIATION ACTIVITIES, $.50 each, Workbook for primary grades. A FLIGHT TO GRANDMOTHERS, $.30 each, 40-page booklet describing a trip taken by a brother and sister. Picture of Wright Brothers' FLYER, $1.00 each. The Wright Brothers (10 pictures), $1.00 each. Pictures, Pamphlets, and Packets, $.50 each. (List of free and inexpensive teaching materials.) Aviation Education Bibliography, $.50 each. (Compilation of books, periodicals, films, etc.) U.S. Aircraft, Missiles, and Spacecraft, $3.00 each, (pictorial review of all U.S. products in current production).
National Association of State Aviation Officals (NASAO) Suite 1002, 1000 Vermont Avenue, N.W. Washington, D. C. 20005	Write for addresses of State Dept. of Aviation.
Railway Express Agency 219 East 42nd St. New York, N. Y. 10017	"Air Express Story" (booklet)
Sanderson Times Mirror 8065 East 40th Avenue Denver, Colorado 80207	Recordings of LP records and tape available on various radio-communications. Aviation-Aerospace Guide and Catalog.
Smithsonian Institution National Air Museum Washington, D. C. 20560	"Monograms on Air Pioneers", National Aeronautical Collections
Superintendent of Documents U.S. Government Printing Office Washington, D. C. 20402	Price List 79, List of pamphlets on aviation

APPENDIX

OTHER RESOURCES (Continued)

U.S. Postmaster General ..... U.S. Air Mail Service Map
Bureau of Fourth Assistant
Washington, D. C. 20260

World Aviation Directory ..... Addresses and references to every major National and International Aviation Organization.
American Aviation Publications, Inc.
1156 15th Street, N.W.
Washington, D. C. 20005

APPENDIX – FILMS

Title	Level	Color	Location
Aerial Bridges of Warm Friendship	M-U	X	Cessna-American Kit Service
Aerodynamics – Problems of Flight			Films
Air Age All Around Us			Institute Cinema
Air All About Us	M	X	Cessna-American Kit Service
Air All Around Us			Young America Films, Inc.
Air Control	5-8		Federal Aviation Administration
Aircraft			Society for Visual Education
Air Force Cameras in Action			Air Force Film Library
Air Force Story, The			Air Force Film Library
Airplane Changes Our World Map			Encyclopedia Britannica Films
Airplanes & How They Fly	M-U	X	Cessna-American Kit Service
Airplanes: Principles of Flight	M-U	X	Cessna-American Kit Service
Airplanes Work For Us	K-U	X	Cessna-American Kit Service
Airplane Trip by Jet, An	K-1		Encyclopedia Britannica Films
Airplane Trip to Mexico			Encyclopedia Britannica Films
Airport Activities	K-4		Academy Films
Airports in Perspective	U		Federal Aviation Administration Film Library
Airport In The Jet Age	K-4		Churchill Films
Airport Passenger Flight			Academy Films
Airport, The	K-3		Academy Films
Airport Transportation			Library Films, Inc.
Air Transportation – Flight			Society for Visual Education
Air Transportation – Passenger			Society for Visual Education
Air University			Air Force Film Library
A Is For Aeronautics			N.A.S.A.
American In Space			N.A.S.A.
Approach to Land	6-8		Oregon State Board of Aeronautics
Ariel 11		X	N.A.S.A.
Autonetics In Action			Autonetics Division
Aviation Mechanic	4-8		Federal Aviation Administration
Before Saturn		X	N.A.S.A.
Beginning Responsibilities: Rules at School	K-4	X	Coronet Films
Behind The Scenes At The Airport			Carl F. Mahnko Productions
Best Investment We Ever Made, The	U	X	FAA Film Library
Billy's Helicopter Ride	K-4	X	Coronet Films
Breakthrough			Air Force Film Library
Busy Airport, The	K-4	X	Cessna-American Kit Service
Challenge of Outer Space			Air Force Film Library
Champions of Champions			General Dynamics Corporation
Checkmate, Dept. of the Air Force			Lockheed
City and Its People, A	1-4	X	Film Associates
Clouds			Almanac Films
Clouds & Weather			Institute Cinema Service
Cold Front, The	5-8		Federal Aviation Administration
Come On Up	K-8	X	Cessna Aircraft Company
Control Procedures	5-8		Federal Aviation Administration
Cross Country Flight	5-8		Federal Aviation Administration
Dream That Wouldn't Down, The			N.A.S.A.
Easy Does It Lockheed			Lockheed-Georgia Company
Everyone Helps in a Community	1-4	X	Churchill Films
Eye In The Sky	K-8	X	McGraw-Hill Films
Family Teamwork and You	4-6		Charles Cahill & Associates, Inc.
Farmer Don and the City	1-4	X	Film Associates
Father of the Space Age			N.A.S.A.
Field Training Program in the U.S.A.F., The			Air Force Film Library
Five Steps to Jet			Air France
Flight	7-8		Federal Aviation Administration
Flight Decision, The	6-8		Idaho Dept. of Aeronautics
Flight of Faith, The		X	N.A.S.A.
Flight Simulation			International Business Machines Corp.

Title	Level	Color	Location
Fog and Low Ceiling Clouds Advection Fog & Ground Fog	7-8		Federal Aviation Administration
Fog and Low Ceiling Clouds Upslope Fog & Frtl Fog	5-8		Federal Aviation Administration
Friendship 7			N.A.S.A.
Fundamentals of Approach Control	6-8		Federal Aviation Administration
Glenn, John, Story, The		X	N.A.S.A.
Groundwork For Peace			Air Force Film Library
Guard of the Sky			Air Force Film Library
History of Aviation			Walt Disney Films
History of Flight Series	K-8		Federal Aviation Administration (1971)
How Air Helps Us	K-4		Cessna-American Kit Service
How An Airplane Flies	7-8	X	Federal Aviation Administration
How Machines & Tools Help Us	K-4		Coronet Films
How Weather is Forecast	5-8	X	Cessna-American Kit Service
Human Factor, The			Lockheed-Georgia Co.
If I Had Wings	I-U	X	Cessna-American Kit Service
In Service Management Engineering			Air Force Film Library
International Skies	6-8		Federal Aviation Administration
It Pays To Stay Open	7-8	X	Federal Aviation Administration
It's Your Decision			Air Force Film Library
Keeping Informed			Air Force Film Library
Let's Learn to Predict Weather	3-8		Coronet Films
Let's Play Fair	5-6		Coronet Films
Man in Flight			Air Force Film Library
Man in Space		X	Association Instructional Materials
Man Encounters Mars			N.A.S.A.
Mrs. Cook Flies For Your Safety	6-8		Federal Aviation Administration
New Giant, The	7-8	X	Hughes Aircraft Co.
New House, The: Where It Comes From	K-6	X	Coronet Films
Of Men and Wings			United Airlines
One Eye On the Instruments	5-8		Federal Aviation Administration
Other Passenger, The	6-8		Federal Aviation Administration
Ounce of Prevention	6-8		Federal Aviation Administration
Our Shrinking World			Young America Films, Inc.
Partners In Freedom			Air Force Film Library
Path to Safety	4-8		Federal Aviation Administration
Pioneers of Space			Assocation Films, Inc.
Place To Land, A	U	X	Federal Aviation Administration
Plane Is Born, A	M-U		Federal Aviation Administration
Policeman, The	K-6		Charles Cahill & Associates, Inc.
Record of a Flight	6-8		Texas Christian University
Reliability Story, The	M-U	X	Cessna Aircraft Company
Rocket Club			Air Force Film Library
Safe Aircraft	6-8		Federal Aviation Administration
Safe Living at Home	4-6		Coronet Films
Saturn Propulsion Systems		X	N.A.S.A.
747 Story	M-U	X	Pan American World Airways
Shape of Things To Come, The		X	N.A.S.A.
Seven League Step Into Tomorrow, The	6-8	X	Boeing Company
Simple Experiments With Air	3-8		Coronet Films
Sky Is No Limit, The			Air Force Film Library
Smokejumpers			Audio-Visual Aids Services
Space Medicine			N.A.S.A.
Space Pilot			Air Force Film Library
Spirit of 76, The			Autonetics, Division
Sport of the Space Age	M-U		Federal Aviation Administration

APPENDIX – FILMS

Title	Level	Color	Location
Take The High Road			Wisconsin Aeronautics Commission
This Is the Falcon	6-8		Hughes Aircraft Co.
To Save a Life			Calif. Aeronautics Commission
Transportation in the Modern World	5-8	X	Cessna-American Kit Service
Traveler Meets Air Traffic Control, A	4-8		Federal Aviation Administration
United 6534	5-8		Idaho Dept. Of Aeronautics
Vital Link, The		X	N.A.S.A.
Wake Turbulence	7-8		Federal Aviation Administration
We Saw It Happen	6-8		United Aircraft Corp.
Weather, The			Encyclopedia Britannica Films
Weather for Beginners	1-3		Coronet Films
What Fathers Do	1-3	X	Churchill Films
Where Am I			Air Force Film Library
Where Does Our Food Come From?	1-3		Coronet Films
Wings for Adventure			United Airlines
Wings of Yesterday			Mobil Oil Co.
World of Jimmy Doolittle, The			TRW Space Systems
World on Wings	7-8	X	Cessna-American Kit Service
You and Me and the SST	6-8		Federal Aviation Administration
Your Share In Space			N.A.S.A.

APPENDIX – FILMSTRIPS

Airplanes & How They Fly	K-8	X	Eye Gate House Inc.
Airplanes At Work, Set I	K-2		Herbert M. Elkins Co.
Airplanes, Set I	K-2	X	Curriculum Materials Corp.
Airport and You, The	K-3		United Airlines
Airport and Your Community			United Airlines
Aviation As A Career – Government & Services			Stanley Bowmar Co.
Aviation As A Career – Manufacturing			Stanley Bowmar Co.
Aviation As A Career – Transportation			Stanley Bowmar Co.
Aviation – Where Career Opportunities Are Bright	6-8	X	National Aerospace Education Council
Families Around the World	1-8		F.O.M. Audio-Visual Division
Flight to Grandmothers, A	K-4	X	National Aerospace Education Council
Getting There and Back by Air	K-8	X	Eye Gate House Inc.
How Do Helicopters Fly?	K-8	X	Photo and Sound
How Is An Airplane Controlled?	3-8		Photo and Sound
How We Fly	K-8	X	McGraw-Hill Films
Jet Age Flight	5-8	X	Society For Visual Education, Inc.
Jet Age Geography In the U.S.A.			United Airlines
Learning Language Through Aviation			Federal Aviation Administration
Let's Fly	K-4	X	Bailey Films, Inc.
Man In Flight	5-8	X	Encyclopedia Britannica Films
Modern Flight	6-8		United Airlines
New Bridges	4-8	X	Cessna-American Kit Service
Path of Least Resistance	4-8	X	Cessna-American Kit Service
People at Work	1-3		Eye Gate House Inc.
People of Other Neighborhoods	1-3		Eye Gate House Inc.
Seeing the Airport			Federal Aviation Administration
Transportation By Air	K-8	X	Eye Gate House, Inc.
What Makes An Airplane Fly?	4-8	X	Photo and Sound
Wings To Understanding Uses of Aircraft			Federal Aviation Administration
Your Flying Partner	4-8	X	Cessna-American Kit Service

APPENDIX – STUDY PRINTS

Title	Number of Prints	Location
Airplanes in Flight	7	Convair Division of General Dynamics
Community Helpers		F. A. Owen Publishing Co.
Community Helpers, Set I, Group 2		F. A. Owen Publishing Co.
Community Helpers, Set II, Group 2		David C. Cook Publishing Co.
Display Pictures	19	Cessna-American Teacher Kit
Early American Transportation	8	Walt Disney Educational Materials Co.
Exhibition Picture Set	8	International Civil Aviation Org.
Famous Douglas Airplanes	Portfolio of Prints	McDonald-Douglas Aircraft Co.
History of Aviation		B & B Division, Stand. Packaging Corp.
History of Mail	16	United Airlines
Historical Picture Series	10	Cessna-American Teacher Kit
Historic Planes	16	United Airlines
How People Travel		David C. Cook Publishing Co.
Postal Helpers		Society for Visual Ed., Inc.
Safety Helpers		Society for Visual Ed., Inc.
Showing Parts of an Airplane		Society for Visual Ed., Inc.
Traces History of Aviation		B & B Division, Stand. Packaging Corp.
Transportation Helpers		Society for Visual Ed., Inc.

APPENDIX

ADDRESSES
BOOKS AND BOOKLETS

Abelard-Schuman Ltd.
6 West 57th Street
New York, N. Y. 10019

Abingdon Press
201 8th Avenue South
Nashville, Tenn. 37202

Allyn & Bacon Inc.
Order & Shipping Division
Rockleigh, N. J. 07646

American Book Distributors
Armour Court
Lake Bluff, Ill. 60044

Avon Book Division
Hearst Company
959 8th Avenue
New York, N. Y. 10019

Benefic Press
10300 W. Roosevelt Road
Westchester, Ill. 60153

Brookings Institute
1775 Mass. Ave., NW
Washington, D. C. 20036

Burdette & Co., Inc.
437 D Street
Boston, Mass. 02210

Cessna Aircraft Company
Air Age Education Division
P.O. Box 1521
Wichita, Ks. 67201

Children's Press Inc.
1224 W. Van Buren Street
Chicago, Ill. 60601

Columbia University Press
136 S. Broadway
Irvington-on-Hudson, N. Y. 10533

Coward-McCann Inc.
200 Madison Avenue
New York, N. Y. 10016

Creative Education Press
Creative Education Society Inc.
500 Kappock Street
Bronx, N. Y. 10463

Thomas Y. Crowell Co.
201 Park Avenue South
New York, N. Y. 10003

Dodd, Mead & Co.
79 Madison Avenue
New York, N. Y. 10016

Doubleday & Co. Inc.
Orders to:
501 Franklin Avenue
Garden City, N. Y. 11530

E. P. Dutton & Co. Inc.
201 Park Avenue South
New York, N. Y. 10003

The Fideler Co.
31 Ottawa Avenue, N.W.
Grand Rapids, Mich. 49502

Garrard Publishing Co.
1607 N. Market Street
Champaign, Ill. 61820

Ginn & Co.
Statler Building
Back Bay, P.O. 191
Boston, Mass. 02117

Golden Press Inc.
Division of Western Pub. Co. Inc.
Orders to:
1220 Mound Avenue
Racine, Wisc. 53404

Grosset & Dunlap Inc.
51 Madison Avenue
New York, N. Y. 10010

E. M. Hale & Co. Inc.
1201 S. Hasting Way
Eau Claire, Wisc. 54701

Hamond Inc.
Maplewood, N. J. 07040

Paul Hamlyn Ltd.
Drury House – Russell Street
London WC2

Harcourt, Brace & World Inc.
751 3rd Avenue
New York, N. Y. 10017

Harper & Row Publishers Inc.
Orders to:
Scranton, Pa. 18512

Harvard University Press
79 Garden Street
Cambridge, Mass. 02138

Harvey House Inc.
5 South Buckout St.
Irving-On–Hudson, N. Y. 10533

Iowa State University Press
Press Building
Ames, Iowa 50010

Alfred A. Kropf Inc.
201 E. 50th
New York, N. Y. 10022
School & library
Orders to:
Random House School &
Library Service, Inc.

Little, Brown & Co.
34 Beacon Street
Boston, Mass. 02106

MacMillan Company
866 3rd Avenue
New York, N. Y. 10022

McGraw Hill Book Co.
330 W. 42nd Street
New York, N. Y. 10036

Melmont Books
Affiliated with:
Children's Press Inc.
1224 W. Van Buren Street
Chicago, Ill. 60601

Meredith Press
Orders to:
1716 Locust Street
Des Moines, Iowa 50303

Julian Messner, Inc.
Orders to:
Simon & Schuster
1 West 39th Street
New York, N. Y. 10018

William Morrow & Co. Inc.
Orders to:
788 Bloomfield Avenue
Clifton, N. J. 07012

W. W. Norton & Co. Inc.
55 5th Avenue
New York, N. Y. 10003

Ottenheimer, Inc.
1330 Reisterstown Road
Baltimore, Md. 21208

Roy Pubs Inc.
30 East 74th Street
New York, N. Y. 10021

G. P. Putnam's Sons
200 Madison Avenue
New York, N. Y. 10016

Random House
201 E. 50th Street
New York, N. Y. 10022

St. Martin's Press Inc.
175 5th Avenue
New York, N. Y. 10010

Charles Schribner's Sons
Orders to:
Shipping & Service Center
Vreeland Avenue
Totowa, N. J. 07512

Sterling Publishing Co.
419 Park Avenue South
New York, N. Y. 10016

Vanguard Press Inc.
424 Madison Avenue
New York, N. Y. 10017

Time-Life Books
540 N. Michigan Avenue
Chicago, Illinois 60611

Viking Press Inc.
625 Madison Avenue
New York, N. Y. 10022

Henry Z. Walck Inc.
19 Union Square West
New York, N. Y. 10003

Franklin Watts, Inc.
Subdivision of Grolier
575 Lexington Avenue
New York, N. Y. 10022

Westminister Press
Witherspoon Building
Juniper & Walnut Streets
Philadelphia, Pa. 19107

World Publishing Co.
110 E. 59th St.
New York, N. Y. 10022

ADDRESSES
FILMS

Air Force Film Library Center
8900 S. Broadway
St. Louis, Mo. 63125

Academy Films, Inc.
748 N. Seward Street
Hollywood, Calif. 90038

Air France
1350 Avenue of the America's
New York, N. Y. 10019

Almanac Films, Inc.
29 E. 10th Street
New York, N. Y. 10003

Association Instructional Materials
Div. of Association Films, Inc.
600 Madison Avenue
New York, N. Y. 10022

Audio Visual Aids Services
712 Romayne Avenue
Racine, Wisc. 53402

Autonetics Division
North American Rockwell Corp.
Film Library, Public Relations Dept.
3370 Mira Loma Avenue
Anaheim, Calif. 92803

Boeing Company
Film Dept. M/S11-23
P.O. Box 3707
Seattle, Wash. 98124

Charles Cahill & Assoc., Inc.
5746 Sunset Blvd.
Los Angeles, Calif. 90028

California Aeronautics Commission
Bus, & Transportation Agency
Sacramento Municipal Airport
Sacramento, Calif. 95822

Cessna Aircraft Company
Air Age Education
P.O. Box 1521
Wichita, Kansas 67201

Churchill Films
662 N. Robertson Blvd.
Los Angeles, Calif. 90069

Coronet Instructional Films
65 E. South Water
Chicago, Ill. 60601

Walt Disney Productions
500 S. Buena Vista Street
Burbank, Calif. 91505

Encyclopedia Britannica Films
Encyclopedia Britannica Ed. Corp.
425 N. Michigan Avenue
Chicago, Ill. 60611

Federal Aviation Administration
Film Library AC-921
P. O. Box 25082
Oklahoma City, Okla. 73125

Film Associates of California
11559 Santa Monica Blvd.
Los Angeles, Calif. 90025

Films, Incorporated
4420 Oakton Street
Skokie, Ill. 60026

General Dynamics Corporation
1 Rockefeller Plaza
New York, N. Y. 10020

Hughes Aircraft Company
Centinela & Teal
Culver City, Calif. 98230

Idaho Department of Aeronautics
Boise Municipal Airport
3103 Airport Way
Boise, Idaho 83705

Institutional Cinema Services, Inc.
29 E. 10th
New York, N. Y. 10003

International Business Machines Corp.
Armonk, N. Y. 10504

Library Films, Inc.
257 Park Avenue
New York, N. Y. 10020

Lockheed-Georgia Co.
86 S. Cobb Drive
Marietta, Ga. 30061

Carl F. Mahnko Productions
215 E. Third
Des Moines, Iowa 50309

McGraw-Hill Films
330 West 42nd Street
New York, N. Y. 10036

Mobile Oil Corporation
Mgtr. General Aviation
150 E. 42nd Street
New York, N. Y. 10017

National Aeronautics & Space Admin.
Film Services FAD-2
Washington, D. C. 20546

Oregon State Board of Aeronautics
3040 25th Street, S.E.
Salem, Oregon 97310

Pan American World Airways
Pan Am Building
Film Library Dept.
New York, N. Y. 10017

Society for Visual Education
1345 W. Diversey
Chicago, Ill. 60614

Texas Christian University
Instructional Media Center
T.C.U. Station Box 30450-A
Fort Worth, Texas 76129

TRW Systems
1 Space Park
Redondo Beach, Calif. 90278

United Aircraft Corporation
400 Main Street
East Hartford, Conn. 01608

United Airlines, Inc.
P.O. Box 66100
Chicago, Ill. 60666

Wisconsin Aeronautics Commission
Wisconsin Dept. of Transportation
994 Hill Farms State Office Bldg.
Madison, Wisc. 53702

Young American Films, Inc.
McGraw-Hill, Inc.
330 W. 42nd Street
New York, N. Y. 10036

ADDRESSES
FILMSTRIPS

Bailey Films, Inc.
6509 De Longpre Avenue
Los Angeles, Calif. 90028

Curriculum Materials Corp.
1319 Vine Street
Philadelphia, Pa. 19107

Encyclopedia Britannica Films
Encyclopedia Britannica Ed. Corp.
425 N. Michigan Avenue
Chicago, Ill. 60611

Eye Gate House, Inc.
Subsidiary of Cenco Instruments Corp.
146-01 Archer Avenue
Jamaica, N. Y. 11435

Federal Aviation Administration
Film Library, AC-921
P.O. Box 25082
Oklahoma City, Oklahoma 73125

F.O.M. Audio Visual Division
Popular Science Publishing Co.
355 Lexington Avenue
New York, N. Y. 10017

Herbert M. Elkins Co.
10031 Commerce Avenue
Tujunga, Calif. 91042

McGraw-Hill, Inc.
330 W. 42nd Street
New York, N. Y. 10036

National Aerospace Education Council
806 15th Street, N.W.
Washington, D. C. 20005

APPENDIX

ADDRESSES
FILMSTRIPS (Continued)

Photo and Sound Company
116 Natoma Street
San Francisco, Calif. 94105

Stanley Bowmar Co., Inc.
Visual Aids
12 Cleveland
Valhalla, N. Y. 10595

United Airlines, Inc.
P.O. Box 66100
Chicago, Ill. 60666

ADDRESSES
STUDY PRINTS

B & B Division
Standard Packaging Corp.
200 E. 42nd Street
New York, N. Y. 10017

Convair Division
General Dynamics Corporation
1 Rockefeller Plaza
New York, N. Y. 10020

David C. Cook Publishing Co.
850 N. Grove Avenue
Elgin, Ill. 60120

McDonald-Douglas Aircraft Co., Inc.
3000 Ocean Park Boulevard
Santa Monica, Calif. 90405

F. A. Owen Publishing Co.
Dansville, N. Y. 14437

Society for Visual Education, Inc.
1345 W. Diversey
Chicago, Ill. 60614

United Airlines, Inc.
P.O. Box 66100
Chicago, Ill. 60666

Walt Disney Educational Materials Co.
800 Sonora Avenue
Glendale, Calif. 91201